

PATENT COOPERATION TREATY

PCT

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 15 APR 2004

WIPO PCT

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| Applicant's or agent's file reference SGS-67/KW | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416) | |
| International application No. PCT/PL 02/00030 | International filing date (day/month/year) 12.04.2002 | Priority date (day/month/year) 12.04.2002 |
| International Patent Classification (IPC) or both national classification and IPC F41B5/12 | | |
| Applicant DZIEKAN, Marcin | | |

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| 1. | This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36. |
| 2. | <p>This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 7 sheets.</p> |
| 3. | <p>This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> I <input checked="" type="checkbox"/> Basis of the opinion II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application |

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| Date of submission of the demand 04.11.2003 | Date of completion of this report 14.04.2004 |
| Name and mailing address of the International preliminary examining authority: <div style="display: flex; align-items: center;"> <div> European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465 </div> </div> | Authorized Officer Spinelli, V Telephone No. +49 89 2399-2903 |



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/PL 02/00030

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1, 2, 4-8 as originally filed
3 received on 13.03.2004 with letter of 01.03.2004

Claims, Numbers

1-14 received on 13.03.2004 with letter of 01.03.2004

Drawings, Sheets

1/7-7/7 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/PL 02/00030**

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|-------------|------|
| Novelty (N) | Yes: Claims | 1-14 |
| | No: Claims | |
| Inventive step (IS) | Yes: Claims | 1-14 |
| | No: Claims | |
| Industrial applicability (IA) | Yes: Claims | 1-14 |
| | No: Claims | |

2. Citations and explanations

see separate sheet

Part V.

- 1.1 Any of the documents cited in the search report could be taken as basis for the preambles of the four independent claims 1, 2, 7 and 9 of this application as each is describing the fundamental parts of a cross bow: a tiller, a bow, a trigger mechanism, all these included in a cross bow for hunting or competition purposes.
- 1.2 However it is still considered to be more appropriate to refer to document D1=US-A-4 711 228 as more concerned (see particularly fig.1, 2 and column 2, line 67-column 3, line 14) with the comprehensive functions and performances of the claimed cross-bow, i.e. its flexibility in and readability for use.
2. In respect of claim 1 (a tiller for a crossbow) it is to note that the tiller therein claimed acts not only as a support for the bow but also as a cocking mechanism: in fact the two tiller arms 1,2 are pivotally connected with each other and when folded, the lower arm is snap-fastened to the butt 5 and to cock the bowstring, one opens the snap fastener, moves the lower arm to the front, moves the lower arm back to the butt and snaps the snap fastener: by means of such a simple movement, the bowstring is drawn without being touched by the user's hand, nor the crossbow needs any positioning during cocking as due in the known tillers (see document D1) by means of a stirrup.
- 3.1 With regard to claim 2 (a bow for a crossbow) it is worth to remark that the bow 12 is held horizontally when shooting, its shape is different from the known ones and also the bow string is arranged differently: in fact the bow has been divided into two arched parts connected in the middle of the limbs 13,14 with a central cross-bar, so that the bow limbs are parallel to the tiller.
- 3.2 Differences in the arrangement of the bow 12 and bowstrings 20 result from the shape of bows and also from the way in which the bowstrings are fixed and run: - - the pulleys 15a,b; 16a,b of the claimed bow are single wheels connected to the limbs extremities and the bowstring 20 runs around the wheel, enters the opening formed in the limb and its extremities are fixed to the pre-cocking mechanism 19; - the pulleys in the bow of D1 are in paired wheels connected to the limbs extremities, no openings being present in the bow limbs of D1.
- 3.3 The performances of the bow known from document D1 is drastically different

from that proposed in claim 7 of the application:

- in D1, the bow in its cocked position is bent towards the tiller on both sides of the connecting handle, when the arrow has been shot, the bow straightens itself;
- in the application, the bow straightens itself when cocked, and goes back to the curved state when the arrow has been shot.

4. The trigger mechanism of claim 7 is provided with a number of peculiarities absent in D1 as in any of the other cited pieces of prior art, wherein (in D1) it is only recited "a trigger mechanism of conventional design": no emphasis being given on the kind of trigger mechanism it would be dealt with, nor exhaustively illustrated the configuration of the relevant trigger mechanism: on the contrary, claim 7 of the application mentions in detail, though not evident, each single component item.
5. Consequently also the crossbow depicted in claim 9 of your application is considered as both new and inventive over the known prior art devices (including document D1) as it includes a tiller, a bow and a trigger mechanism in accordance with respectively the subject-matter of claims 1, 2 and 7 which were recognised in previous paragraphs 2. to 4. as deserving novelty and inventiveness: relevant claim 9 satisfies, hence, the provisions of Art.33(1-4) PCT.
6. The combination of the features of claims 3 to 6, 8 and 10 to 14 respectively dependent of claim 2, 7 or 9 is neither known from, nor rendered obvious by, the available prior art; they show optional embodiments respectively of:
 - the bow for a crossbow of claim 2 (claim 3 to 6);
 - the trigger mechanism for a crossbow of claim 7 (claim 8);
 - the crossbow of claim 9 (claims 10 to 14).Being the subject-matter of said claims 1, 2, 7 and 9 all recognised both new and inventive, also the ancillary matter recited by said claims 3 to 6, 8 and 10 to 14, is considered as being new and inventive over the nearest prior art disclosure of document D1: claims 3 to 6, 8 and 10 to 14 conform with Art.33(1-4) PCT.
7. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D1 is not mentioned in the description, nor is this document identified therein.